



FLWEMS Paramedic Medication Information For:

**ADENOSINE**

(Adenocard)

(ah-DEN-oh-seen)

**Pregnancy Category**

C Adenocard Adenoscan (Rx)

**Classification**

Antiarrhythmic

**Action/Kinetics**

Found naturally in all cells of the body. It slows conduction time through the AV node, interrupts the reentry pathways through the AV node, and restores normal sinus rhythm in paroxysmal supraventricular. Competitively antagonized by caffeine, theophylline, and dipyridamole. Onset, after IV: 34 sec. t1/2: Less than 10 sec (taken up by erythrocytes and vascular endothelial cells). Duration: 1-2 min. Exogenous adenosine becomes part of the body pool and is metabolized mainly to inosine and AMP.

**Uses**

Conversion of sinus rhythm of paroxysmal SVT (including that associated with accessory bypass tracts). The phosphate salt is used for symptomatic relief of complications with stasis dermatitis in varicose veins. *Investigational:* With thallium-201 tomography in noninvasive assessment of clients with suspected CAD who cannot exercise adequately prior to being stress-tested. Adenosine is not effective in converting rhythms other than paroxysmal SVT. The phosphate salt has been used to treat herpes infections and to increase blood flow to brain tumors and in porphyria cutanea tarda.

**Contraindications**

Second- or third-degree AV block or sick sinus syndrome (except in clients with a functioning artificial pacemaker), atrial flutter, atrial fibrillation, ventricular tachycardia. History of MI or cerebral hemorrhage.

**Special Concerns**

At time of conversion to normal sinus rhythm, new rhythms (PVC, atrial premature contractions, sinus bradycardia, skipped beats, varying degrees of AV block, sinus tachycardia) lasting a few seconds may occur. Use with caution in clients with asthma. Safety and efficacy as a diagnostic agent have not been determined in clients less than 18 years of age.

**Side Effects**

CV: Short lasting first-, second-, or **third-degree heart block; cardiac arrest** sustained ventricular tachycardia, sinus bradycardia, ST-segment depression, sinus exit block, sinus pause, arrhythmias, T-wave changes, hypertension, prolonged asystole, Nonfatal MI, transient increase in BP, **ventricular fibrillation**. Facial flushing (common), chest pain, sweating, palpitations, hypotension (may be significant). CNS: Lightheadedness, dizziness, numbness, headache, blurred vision, apprehension, paresthesia, drowsiness, emotional instability, tremors, nervousness. GI: Nausea, metallic taste, tightness in throat. Respiratory: SOB or dyspnea (common), urge to breathe deeply, chest pressure or discomfort, cough, hyperventilation, nasal congestion. GU: Urinary urgency, vaginal pressure. *Miscellaneous:* Pressure in head, burning sensation, neck and back pain, weakness, blurred vision, dry mouth, ear discomfort, pressure in groin, scotomas, tongue discomfort, discomfort (tingling, heaviness) in upper extremities, discomfort in throat, neck, or jaw.

**Drug Interactions**

*Aloe; Buckthorn bark/berry; Cascara sagrada bark; Rhubarb root; Senna pod and leaf* / Possible ↑ adenosine effect *Carbamazepine* / ↑ AV block *Caffeine* / Competitively antagonizes effect of adenosine *Digitalis* / Possibility of ventricular fibrillation (rare) *Dipyridamole* / ↑ Effect of adenosine *Theophylline* / Competitively antagonizes effect of adenosine

**How Supplied**

*Injection:* 3 mg/mL

**Dosage**

- Rapid IV Bolus Only *Antiarrhythmic*.

Initial: 6 mg over 1-2 sec. If the first dose does not reverse the SVT within 1-2 min, 12 mg should be given

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as a rapid IV bolus. The 12-mg dose may be repeated a second time, if necessary. Doses greater than 12 mg are not recommended.

- IV Infusion Only *Diagnostic aid.*

Adults: 140 mcg/kg/min infused over 6 min (total dose of 0.84 mg/kg).

- IM Only *Varicose veins.*

Initial: 25-50 mg 1-2 times daily until symptoms subside. Maintenance: 25 mg 2 or 3 times weekly.

**END OF INFORMATION – NOTHING FOLLOWS**